did not have thyroid or liver function test, respectively in the previous 6 months.
CONCLUSIONS: Patient safety from amiodarone toxic effects is of high concern. Despite national guidelines and a high prevalence of use, we found that over half of the patients receiving amiodarone therapy were not being monitored appropriately for toxicity. We conclude that there is need for a formal amiodarone monitoring program in this setting. We have designed and are testing a chart reminder system to address this deficit.

HP4

THE IMPACT OF ADHERENCE TO OSTEOPOROSIS THERAPY ON FRACTURE RATES IN ACTUAL PRACTICE

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OBJECTIVES: Clinical trials have demonstrated that drug therapy can reduce osteoporosis-related fracture risk in women over 50 years by up to 40% provided they consistently take their medication for a year or more. Non-adherence with drug therapies not only limits the drugs' effectiveness, but could also be associated with a higher fracture risk. The objective of this study was therefore to estimate fracture risk in relation to adherence with osteoporosis medication in actual practice.
METHODS: Demographic, prescription drug use, physician services and hospitalization information for females with osteoporosis who were dispensed an osteoporosis medication between 1996 and 2001 (entry date defined as first dispensing in this period) was obtained from the Saskatchewan Health data files. Adherence to treatment was defined as drug available to cover 80% of the time. Subsequent fractures were identified via hospitalizations or physician contacts with a relevant diagnostic or procedure code. The risk of fractures in relation to adherence was examined using a Cox proportional hazards model with time-dependent covariates. The impact of other patient characteristics, including age, having suffered a prior fracture, prior use of osteoporosis medication and steroids, was also examined.
RESULTS: 11,249 women suffering from osteoporosis were identified with a mean age at the time of the index prescription of 68.4 years and average follow-up of 2.3 years with a fracture rate of 4.5% per year. Patients who adhered experienced a 16% lower fracture rate. The effect of adherence was maintained after controlling for other patient characteristics that independently predict the fracture rate, including interactions.
CONCLUSIONS: These results indicate that improving adherence in actual practice will significantly decrease the osteoporosis-related fracture risk.

CARDIOVASCULAR DISEASES/DISORDERS II

CV5

COST-EFFECTIVENESS OF STATINS IN PRIMARY PREVENTION OF CHD

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OBJECTIVES: To investigate under which circumstances statins can be considered cost-effective in primary prevention of CHD, and to identify the most sensitive parameters.
METHODS: A Markov Model is used to tackle the research question for the health insurance and the social insurance in Germany. Life years gained are chosen as effectiveness parameter. Mortality is based on the concept of Gompertzian analysis, linking mortality rates for persons with and without coronary heart disease (CHD). Costs components comprise of prevention costs, costs in the life years gained, national insurance contributions and avoided costs for CHD-treatment. Age and gender specific costs and expenditures for health states are estimated from data of the social insurance including pension payments. CHD-risk estimates are primarily based on Framingham risk equations, but an alternative method using current CHD-mortality data is used as well.
RESULTS: With yearly Statin prices of 300 € (€/$ = .9) and a relative CHD-risk reduction of 28%, statin treatment for a 50 year old male with a yearly CHD-risk of 1,5% would cost between 23,000 € and 26,000 € per life year gained for the social insurance and 13,000 € and 16,000 € for the health insurance. For higher CHD-risks statin treatment gets more cost-effective. At a given value of CHD-risk, cost-effectiveness is generally better for younger patients. The most sensitive parameters are the yearly statin prices und the relative risk reduction. Per rise in statin prices of 100 €, cost-effectiveness would increase between 5,000 € and 7,000 € per life year gained depending on age and gender. Avoided CHD-treatment costs, however, have only a minor impact on the cost-effectiveness-ratio.
CONCLUSIONS: Treatment guidelines for CHD prevention incorporating cost-effectiveness considerations are vulnerable to future statin pricing after the soon fall of protection by patent. Correct risk estimation remains one important objective in targeting resources for primary CHD-prevention.

CV6

COMPARING RECENT CARDIOVASCULAR MEDICATIONS USING AN NNT MODEL

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The number needed to treat (NNT) has been promoted as a tool for helping decision makers but valid compari-